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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,181	02/27/2002	Masaki Hamamoto	70551/57152	1419
21874	7590	10/03/2003	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 9169 BOSTON, MA 02209			DINH, TIEN QUANG	
			ART UNIT	PAPER NUMBER
			3644	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/085,181	Applicant(s) HAMAMOTO ET AL.	
	Examiner Tien Dinh	Art Unit 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 9-12, 16 and 17 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 1-7, 13-15, 18, 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gray or Remo Aeronautical Corp.

Gray or Remo Aeronautical Corp. discloses a flying body having a wing portion (with two wings) that flutters, driving portion to move the wing portion up and down, main body, and a time average for the series of down and up strokes of the wing to allow the flying body to fly. In the up stroke, the volume is less than the volume of the down stroke (this is how the aircrafts can fly). The wing portion has a wing shaft (see figure 4 in Remo and figure 1 in Gray) that supports the wing portion and allows the wing portion to be connected to the body. Please note that when the wing portion is in its up and down stroke positions, the torsion angle is changed so that the aircraft can fly. Therefore, the torsion angle in the down stroke is different from that of the torsion angle in the up stroke. The driving portion changes with time said torsion angle. The apparatus can hover using the two wings. Hover is defined as "To remain or linger in or near a place."

Re claim 3, it would have been obvious to one skilled in the art to have made the flying machine of Gray or Remo Aeronautical Corp. small enough so that it can be flown indoors.

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Claims 13-15, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray or Remo Aeronautical Corp. in view of Berejik et al.

Gray or Remo Aeronautical Corp. discloses all claimed parts except for the memory portion, communication system, target manner of movement is realized by time-sequentially combining basic operations in accordance with basic operations pattern data, and storing means for storing combination of basic operations pattern data and driving manner data related to the manner of driving the driving portion realizing the basic operation pattern data. However, Berejik et al discloses the memory portion, communication system, target manner of movement is realized by time-sequentially combining basic operations in accordance with basic operations pattern data, and storing means for storing combination of basic operations pattern data and driving manner data related to the manner of driving the driving portion realizing the basic operation pattern data are well known in the art (please see the figures and specification).

It would have been obvious to one skilled in the art at the time the invention was made to have used the memory portion, communication system, target manner of movement is realized by time-sequentially combining basic operations in accordance with basic operations pattern data, and storing means for storing combination of basic operations pattern data and driving manner data related to the manner of driving the driving portion realizing the basic operation pattern data in Gray or Remo Aeronautical Corp.'s system as taught by Berejik et al to allow the aircraft to fly efficiently and as desired.

Re claim 13, please note that environmental condition data such as temperature sensors, cameras, altitude sensors are notoriously well known in the art.

Response to Amendment

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The applicant's arguments on the Fox reference is considered moot since the Examiner has introduced Gray or Remo Aeronautical Corp. in the new rejection of the amended claims.

Allowable Subject Matter

Claim 8 is allowed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 703-308-2789. The examiner can normally be reached on 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Jordan can be reached on 703-306-4159. The fax phone numbers for the organization where this application or proceeding is assigned are 703-306-4195 for regular communications and 703-306-4195 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4195.

TD
October 1, 2003

